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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/524,987

02/21/2006

Dietmar Rakutt

05-180

3235

34704 7590 10/31/2008

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SUITE 1201

NEW HAVEN, CT 06510

EXAMINER

THOMAS, ALEXANDER S

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

10/31/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/524,987	<b>Applicant(s)</b> RAKUTT ET AL.	
	<b>Examiner</b> Alexander Thomas	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22-31 and 40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-31 and 40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 22-31 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noel 4,755,408 in view of Cate et al 2004/0001945. Noel discloses a plastic structural element comprising a plurality of thermoplastic foamed body segments 1 arranged next to each other on a plane and welded to each other at abutting side faces to define a foam sheet; see Figure 48, column 9, line 55 through column 10, line 5. This block of adhered body segments can be cut to length (column 10, lines 6-8), i.e. cut off normal to the longitudinal axes of the tubes (column 10, lines 56-61), to form a panel (see Figures 48 or 18, for example). The weld seams between adjacent tubes in the Noel product would inherently be “substantially pore-free” since the edges of the tubes to be joined are melted and then compressed together (see the paragraph bridging columns 9 and 10), which is the same technique used in the applicant’s process of forming the weld seams (see page 9, lines 2-5), and would substantially allow any air to be removed. The array of weld seams disclosed in Noel’s Figures, such as Figure 48, intrinsically form a network of struts (struts, in that the welds seams are elongated along the length of the tubes). Thus the only feature of independent claims 25 and 28 that Noel does not disclose is a stretched polymer structure in the extruded tubes or bodies. Cate et al discloses the desirability of using *stretched* closed-cell foam in structural composites to provide strength properties in a particular direction; see [0010] and [0029]

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for example. Such products are produced by stretching or pulling the extrudate from the die. It would have been obvious to one of ordinary skill in the art to use stretched foam segments in the panels of the primary reference in view of the teachings in the secondary reference to provide enhanced structural properties in a particular direction of the panels. Concerning claim 22, Noel discloses the use of closed cell foams is well-known in the panel art; see column 1, line 14. It would have been obvious to one of ordinary skill in the art to use a closed cell foam material in the product of the combined prior art to provide insulating properties. Concerning claims 23 and 31, it would have been obvious to one of ordinary skill in the art to use a known foam material, such as PET, etc., in the product of the reference in order to provide an insulating product with particular properties since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Concerning claims 24, 26 and 27, Noel discloses these features as noted above. Concerning claims 29 and 30, Noel discloses that the tubes may have a square cross-section which would inherently produce a product with body segments fitted together without interruption. Concerning claim 40, Noel discloses the claimed shape of the element in Figure 48 and also suggests cutting his tubes to any desired length; see column 10, lines 6-8 and 56-67. The stretched polymer structure will be in a direction along the length of the tubes as a result of pulling the foam tubes from the dies during extrusion as taught in Cate et al and thus be perpendicular to the large sides of the product in Figure 48 of Noel.

***Response to Arguments***

3. Applicant argues that the orientation of the chain structure in his product is perpendicular to the plane of the bodies and that the art of record is silent as to this feature. However, this is not true. Cate et al discloses stretching or pulling the foam product from the die during extrusion; see [0029]. Using the Cate et al technique during the forming of the product of Noel in Figure 48 will result in the product having a direction of the orientation of the polymer chain structure that is perpendicular to the plane of the bodies.

***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Thomas whose telephone number is 571-272-1502. The examiner can normally be reached on 6:30-4:00 M-THUR.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alexander Thomas/  
Primary Examiner  
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